July-Sept 2004

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Pelagic Fisheries Research Program

university of hawai'i at mānoa

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July–September 2004

Nations Gather for PrepCon VI; Commission to Meet in December

Robert A. Skillman

The sixth meeting of the Preparatory Conference (PrepCon) for the Establishment of the Commission on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean was held April 19 to 23, 2004, in Bali, Indonesia. With the deposit of 14 instruments of ratification on April 19, the Convention entered into force on June 19.

The convention has been ratified by Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga and Tuvalu. The United States, China, the European Community, France, Indonesia, Japan, Chinese Taipei, and Republic of Korea have also indicated an intention to become members.

At the 6th meeting, the PrepCon for the most part finished its business of establishing the foundation for the Commission to begin operation when it comes into force, including a provisional agenda for the inaugural meeting. Thus, during its last meeting in December, the PrepCon will bring its findings, products, and recommendations together for delivery to the Commission.

The inaugural meeting of the Commission is likely to include much ceremony, but selection of the Chair and Co-Chair of the Commission, selection of the Executive Director of the Secretariat, and establishing membership of subsidiary bodies will also likely occur. The final PrepCon meeting and the inaugural meeting of the Commission have been scheduled for the week of December 6.

The Marshall Islands, which will host the Commission Secretariat, will also host the inaugural meeting. The first substantive meeting of the Commission will not likely be held until the 2nd quarter of 2005.

With the following recommendations, Working Group I of the PrepCon on administrative matters essentially completed its work: 1) the structure and functions of the staff of the Secretariat based on advice from Working Group II and Working Group III; 2) the budget for the early years of the Commission and the formula for computing member contributions; 3) a system of salaries and allowances related to that applied by the agencies of the Council of Regional Organizations of the Pacific; and 4) draft Financial Regulations of the Commission.

Working Group II on science completed its work or set the basis for doing so with the following recommendations: 1) a timeline on

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A school of yellowfin tuna swims furiously past the camera. (Photo by Bill Boyce; www.boyceimage.com)

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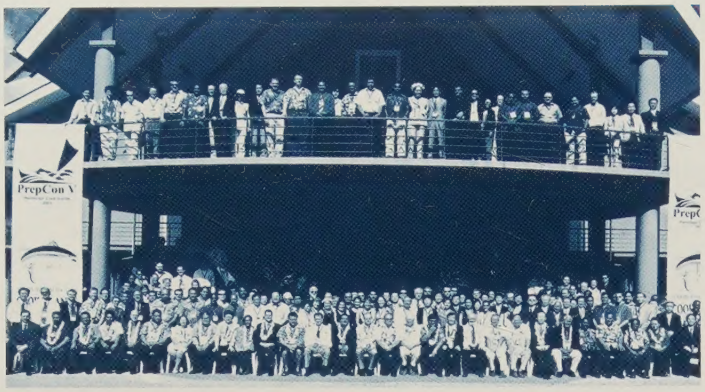

Participants at PrepCon V, which was held in Rarotonga, Cook Islands.

which the Scientific Committee and its subsidiary working groups should meet in mid-year following the availability of current fishery data and stock assessments followed by a 2-3 month period for preparation of final documents and management advice to the Commission at its annual meeting in the 4th quarter; 2) revision of the draft budget for the Commission to provide for the separate meeting of the Scientific Committee from the Commission; 3) selection of Chair and Vice-Chair of the Scientific Committee during the inaugural meeting of the Commission; 4) a provisional agenda for the first substantive meeting of the Scientific Committee in 2005; 5) formation of working groups based on those used by the Secretariat of the Pacific Communities' Standing Committee on Tuna and Billfish (SCTB); and 6) its Scientific Coordinating Group should meet a third time, following the 17th meeting of the Secretariat of the Pacific Communities' Standing Committee on Tuna and Billfish in August 2004 for the purpose of providing advice to the PrepCon on the status of the resources, management alternatives specifically for bigeye tuna and yellowfin tuna, and subsidiary working groups based on the experience of the SCTB with its revised working group structure; and 7) that it would be appropriate for the Interim Scientific Committee to provide advice on the condition of northern stocks to the Commission's Northern Committee and that an administrative arrangement should be prepared to effect this.

Working Group III on compliance completed a first draft of the Commission's record of vessels and fishing authorizations and recommended that it be completed during PrepCon VII. The group recommended a uniform vessel marking scheme for the Commission but left a uniform marking scheme for gear to be addressed at its final meeting. The Working Group will also address specifications for an observer program, VMS, and the status of cooperating on-contracting parties (i.e., non-members).

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PFRP Principal Investigators Workshop Set; CLIOTOP Working Groups to Follow

The Pelagic Fisheries Research Program (PFRP) will convene its Principal Investigators Workshop November 29 to December 1 at the Imin Conference Center on the campus of the University of Hawai'i at Mānoa. The workshop will host scientists currently conducting PFRP-sponsored research and is designed to create avenues of collaboration among scientists from different disciplines.

In order to place PFRP research in a wider context, the Principal Investigators Workshop is generally organized around specific themes. Previous themes have included Pacific tuna fisheries, genetic studies of population structure, economic considerations for international tuna management, scales of spatial variability, ecosystem-based fishery management, secure deployment of electronic tags on large pelagic animals, and "data rescue."

This year's Workshop will return its attention to ecosystem approaches to fishery management. The primary thematic focus of the meeting will be on processes occurring at mid-trophic levels: dynamics of prey species, spatial (both horizontal and vertical) variability in prey abundance, novel tools for analysis of trophic dependencies, and downward propagation changes in trophic structure due to changes in predator abundance. The ecosystem emphasis will be reinforced by convening a meeting of Climate Impacts on Top Predators (CLIOTOP) working groups December 1-3, following the Workshop.

CLIOTOP is a new Global Ocean Ecosystem Dynamic (GLOBEC) regional program which will address open ocean ecosystem dynamics and the influence of climate on the dynamics of top predator populations. For more information about CLIOTOP, visit online at http://www.pml. ac.uk/globec/Structure/RegProgs/cliotop/cliotop.htm.

PFRP recently completed a new round of proposal solicitation. Presentations by researchers from several new projects will be an important part of the 2004 Principal Investigators Workshop.

To attend or to make a presentation, contact PFRP's John Sibert at sibert@hawaii.edu or Dodie Lau at lau@hawaii.edu. For more information, visit PFRP online at http://www.soest. hawaii.edu/PFRP.

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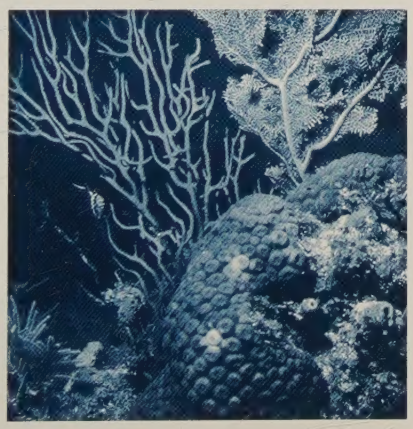
Ocean Commission Report Calls For Balance in National Policy

Following the most comprehensive review of the nation's oceans and coasts since the Stratton Commission report 35 years ago, the U.S. Commission on Ocean Policy has released its preliminary report calling for a delicate balance in resource management. The proposed blueprint calls for a national policy that balances use with sustainability, is based on sound science and educational excellence, and moves toward an ecosystem-based management approach.

With ecosystem-based management as its main theme, the Commission concluded that ocean and coastal resources must be managed to reflect the complex interrelationships among the ocean, land, air, and all living creatures, including humans, and consider the interactions among the multiple activities that affect entire systems.

"Our oceans and coasts are in trouble, and we as a nation have an historic opportunity to make a positive and lasting change in the way we manage them before it is too late," said retired Admiral James D. Watkins (USN), Chair of the U.S. Commission on Ocean Policy. "If the recommendations contained in our report are adopted, we will create sustainable oceans and coasts for many, many years. We will create sustainable ocean resources; sustainable fisheries; sustainable recreation for our children and their children; sustainable economic development; and a sustainable future for our oceans and coasts."

The National Oceanic and Atmospheric Administration (NOAA) reports that more than 37 million people, 19 million homes, and countless businesses have been added to coastal areas. Marine transportation, along with coastal recreation and tourism, are listed among the main drivers of the national economy. These developments also are among the leading causes of depleted resources, lost habitat and polluted waters. America's coastal waters are essential spawning, feeding, and nursery areas for over three quarters of U.S. commercial fish catches. About 40,000 acres of coastal wetlands disappear each year.



A reef with sea rods in the Florida Keys National Marine Sanctuary. (Photo by Mike White; image courtesy of NOAA)

Coral reefs in the United States cover approximately 7,577 square miles and comprise approximately two percent of the world's reefs. This includes the third largest barrier reef in the world, the Florida Keys, and the second largest reef protected area in the world, the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve, which is about 1,200 miles long.

Current projections indicate 50-60 percent of coral reefs may be lost during the next 30 years as a result of eutrophication, sedimentation, removal of reef fish and changes in the ambient environment. Twelve billion tons of ballast water are shipped around the world each year, spreading alien and invasive species.

"Our report puts forth long overdue bold and broad-reaching recommendations for reform to our national ocean policy," Watkins said. "Reform that needs to start now, while it is still possible to reverse distressing declines, seize exciting opportunities, and sustain the oceans, coasts and their valuable assets for future generations." The Commission identified a number of needed changes based on three fundamental themes:

- Creating a new national ocean policy framework to improve decision-making: A new national ocean policy framework must be established to improve federal leadership and coordination to enable agencies to address the ocean, land and air as one inter-connected system. This framework also enhances opportunities for state, territorial, tribal and local entities to develop common regional goals and priorities.
- Strengthening science and generating high-quality accessible information to inform decision makers: Policies and decisions about ocean and coastal resources must be based on the most current, unbiased, credible scientific information. This requires new investment in the infrastructure to support data collection and research and the means to effectively translate scientific findings into useful and timely information for policy managers, educators and the public.
- Enhancing ocean education to instill future leaders and informed citizens with a stewardship ethic: Improve decision makers' understanding of the oceans, for the general public to develop a sense of stewardship, and to prepare a new generation of leaders to confront issues dealing with oceans and coasts.

Building on the foundation of these themes, the U.S. Commission on Ocean Policy preliminary report contains recommendations that span ocean and coastal issues, ranging from upstream areas to the depths of the oceans floor, from the practical problem-solving issues to philosophical approaches that will guide the nation into the next century. The Commission concluded that the following actions are critical:

- Establishment of a National Ocean Council in the Executive Office of the President chaired by an Assistant to the President;
- Creation of a non-federal Presidential Council of Advisors on Ocean Policy;
- Strengthen the National Oceanic and Atmospheric Administration and improve federal agency structure;

(continued on page 5)

PFRP Collaborator Arauz Wins Top UK Conservation Award

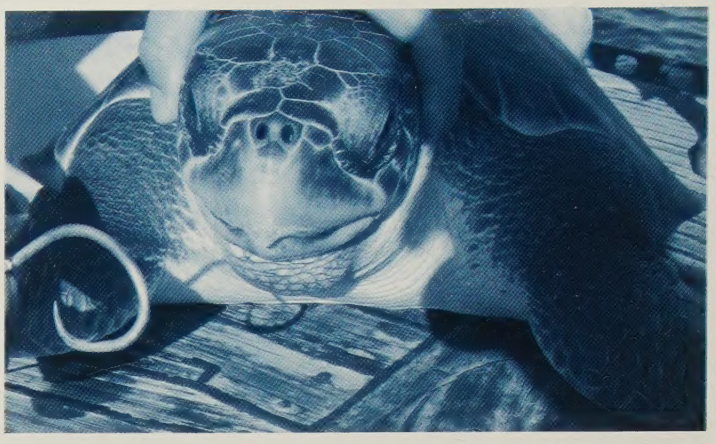
Randall Arauz, director of Costa Rica's PRETOMA (Programa Restauración de Tortugas Marinas, www.tortugamarina.org), and the Central American Director of the Sea Turtle Restoration Project (http://www.seaturtles.org), is this year's winner of the Whitley Gold Award for International Nature Conservation. Her Royal Highness Princess Ann presented the award, which includes a £60,000 grant to further Arauz's work to protect the ocean and its endangered marine species, at London's Royal Geographical Society in April.

Randall Arauz (right) is the bridge between science and the community in Costa Rica. Speaking with a fisherman in Playa de Coco, Arauz holds a pop-off satellite archival tag (PSAT). The device is attached to a captured turtle to help track its movements after being released from fishing gear. The PSAT helps researchers learn whether a turtle survives the fishery encounter, or if the fishery encounter influences its behavior. (Photo by Yonat Swimmer)

Arauz hopes to stem the collapse of shark numbers off Costa Rica, where he leads a campaign against shark finning—cutting off a shark's fin and throwing the shark back into the sea, a practice thought to be the main factor behind the decimation of the world's shark populations. His work has already been highly instrumental in the protection of other endangered marine species, such as turtles and dolphins.

In collaboration with the Pelagic Fisheries Research Program and the National Marine Fisheries Service, Arauz conducts research which includes bait tests aboard commercial longline fishing vessels in waters off Costa Rica to help reduce accidental capture of sea turtles.

"Aruaz can talk to anyone ranging from the local fishermen to the fishing companies to the President of Costa Rica," said Edward Whitley, founder of the Whitley Awards and Chairman of the



Longline hook removed from lower jaw of an olive ridley sea turtle in Costa Rica. (Photo by Yonat Swimmer)

Whitley Laing Foundation. "He is poised to broaden his work down the coast to Salvador and Guatemala. He has done the science, knows his facts and has campaigned to change the fishing laws." The Whitley Laing Foundation offers a wide range of awards for nature conservation projects worldwide, which generally emphasize the benefits of wildlife and habitat conservation to the local communities. The Awards recognize the most outstanding conservation work by individuals around the world fighting to safeguard the planet's resources and wildlife.

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A cove and rocky headland seen from a hill on Isla Cocos, Costa Rica. Costa Rica is a very important actor in the development of shark fisheries in the region, as it not only has the largest longline fleet in Latin America, over 500 vessels, it also allows hundreds of foreign vessels from nations as far as Taiwan, Indonesia and Malaysia to land shark products. (Photo by Michael Theberge; image courtesy of NOAA)

Ocean Commission Report (continued from page 3)

- Develop a flexible, voluntary process for creating regional ocean councils, facilitated and supported by the National Ocean Council;
- Double U.S. investment in ocean research;
- Implement the national Integrated Ocean Observing System;
- Increase attention to ocean education through coordinated and effective formal and informal programs;
- Strengthen the link between coastal and watershed management;
- Create measurable water pollution reduction goals, particularly for non-point sources, and strengthen incentives, technical assistance, and other management tools to reach those goals;
- Reform fisheries management by separating scientific assessment and allocation, improving the Regional Fishery Management Council system, and exploring the use of dedicated access privileges;
- Accede to the United Nations Convention on the Law of the Sea; and
- Establish an Ocean Policy Trust Fund based on revenue from offshore energy activity and other new and emerging offshore uses to pay for implementing the recommendations.

"This is a crossroads moment for our country and the future of our nation's oceans and coasts," Watkins said. "It will require great political will, investment and support of the public. But the benefits and pay off to this country—and its citizens—will far exceed the cost and the effort for generations to come."

An electronic copy of the U.S. Ocean Commission preliminary report is available online at http://oceancommission.gov.

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Upcoming Events

American Fisheries Society 134th Annual Meeting

August 22-26, 2004, Monona Terrace, Madison, Wisconsin
Co-sponsors include NOAA, U.S. Fish and Wildlife Service and the U.S. Coast Guard
Contact: Philip Moy, Wisconsin Sea Grant, at pmoy@aqua.wisc.edu
Online information: http://www.afs2004madison.org/

North Pacific Marine Science Organization (PICES) 13th Annual Meeting

October 14-24, 2004, Hawaii Convention Center, Honolulu
Hosted by the Government of the United States of America, in coordination with the PICES Secretariat; logistical support by the Pacific States Marine Fisheries Commission.
Contact: PICES at secretariat@PICES.int
Online information: http://www.pices.int/meetings/annual/Pices13/default.aspx

Pelagic Fisheries Research Program, Principal Investigators Workshop

November 29-December 1, 2004
CLIOTOP Meeting, December 1-3, 2004
Imin Conference Center, University of Hawai'i at Mānoa
Contact: John Sibert at sibert@hawaii.edu
Online information: http://soest.hawaii.edu/PFRP

PrepCon VII (Preparatory Conference for the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific)

December 6-7, 2004, Pohnpei, Federated States of Micronesia
Online information: http://www.ocean-affairs.com

Inaugural Session of the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific

December 8-10, Pohnpei, Federated States of Micronesia
Online information: http://www.ocean-affairs.com

Managing Our Nation's Fisheries: Past, Present, and Future—Online Report Available

NOAA Fisheries and the nation's eight Regional Fishery Management Councils have reviewed and evaluated the management of U.S. marine fisheries, producing a region-by-region online report card. "Managing Our Nation's Fisheries: Past, Present, and Future" is now available to the public online at www.managingfisheries.org.

The National Fisheries Conference, held last November in Washington, D.C., hosted discussions on contemporary issues such as fisheries governance, bycatch, fish habitat, community considerations, and ecosystem-based approaches, as well as how ecosystem considerations are currently being incorporated into fishery management decisions. The 254-page report documents the progress made toward improving the health and longterm viability of marine fisheries resources.

"We hope that this document will be extremely useful in charting the course of future U.S. fishery management policy, including implementation of the recent recommendations of the U.S. Commission on Ocean Policy and pending reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act," said Chris Oliver, Executive Director of the North Pacific Fishery Management Council, and primary organizer of the national event.

Conference attendees, numbering nearly 600, concluded that the future looks bright for U.S. fisheries and marine resources. The conference also highlighted remaining challenges and explored various approaches to meeting those challenges. Keynote speakers at the conference included U.S. Senator Ted Stevens, Coast Guard Admiral Thomas Collins, NOAA Administrator Admiral Conrad Lautenbacher, Deputy Secretary of Commerce Sam Bodman, NOAA Fisheries Administrator Bill Hogarth, and retired Admiral James D. Watkins from the U.S. Commission on Ocean Policy.

Currently, recreational and commercial fisheries contribute $60 billion to the gross national product each year, and further economic growth is expected as fish stocks continue to rebuild. Fishery managers are focusing attention on minimizing the effects of fisheries on marine habitat, further incorporating eco-system considerations in their management plans, developing capacity limitations or associated rationalization measures, and minimizing interactions of fisheries with protected species such as whales, seals, sea turtles and seabirds.

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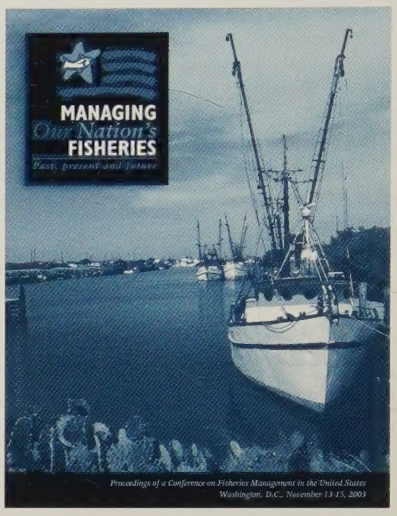
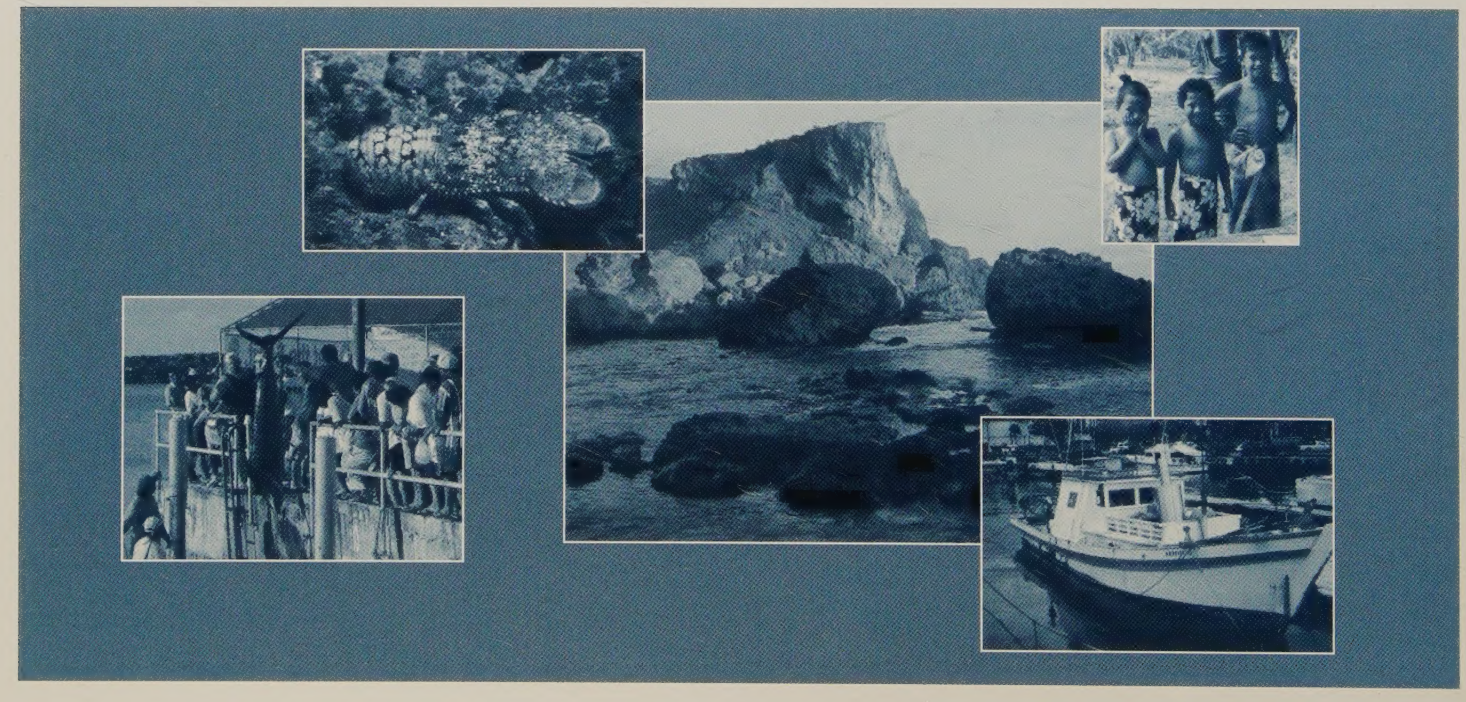

MANAGING
Our Nation's
FISHERIES
Past, present and future
Proceedings of a Conference on Fisheries Management in the United States
Washington, D.C., November 13-15, 2003

Cover and images from "Managing Our Nation's Fisheries."



Accomplishments Cited in PFRP Online Report

"The Pelagic Fisheries Research Program: 10 Years of Excellence," researched and written by Noreen M. Parks and edited by John Sibert, highlights the accomplishments of the Pelagic Fisheries Research Program (PFRP) from 1993 to 2003. Operating from the University of Hawai'i-Mānoa, the program supports the scientific research needs of the Western Pacific Fishery Management Council, in conjunction with the National Oceanic and Atmospheric Administration. More than 70 projects have been funded to address questions in fisheries biology, oceanography, statistics and modeling, genetics, protected species, fisheries economics and socio-cultural issues.

The PFRP has played a leading role in promoting research in support of the ecosystem approach to fisheries. Through its links with the University of Hawai'i, the PFRP is able to assist in training new fisheries scientists. In its scientific collaborations and participation in multinational forums for fisheries management, the PFRP also has played an important role in fostering international cooperation for the sustainable management of pelagic fisheries throughout the central and Western Pacific. Responding to emerging scientific needs for responsible fisheries stewardship, the program continues to sponsor cutting-edge, multidisciplinary research.

Following is an excerpt from "The Pelagic Fisheries Research Program: 10 Years of Excellence," by Noreen M. Parks. The full report is available online at http://www.soest.hawaii.edu/PFRP.

The Pacific Ocean—Heart of the Blue Planet, Home to the World's Richest Fisheries

If you hitched a ride on a space shuttle circling the globe, during much of the voyage the Pacific Ocean would dominate your view of Earth. Our "blue planet" owes much of its liquid character to the Pacific, which covers nearly one third of the globe—an area larger than all the landmasses combined. More than twice the size of the Atlantic Ocean, the Pacific encompasses over 64 million square miles, spanning from pole to pole and stretching more than 9,000 miles along the equator from Asia to the Americas. Simply put, the Pacific Ocean is Earth's largest geographic feature. The central and western reaches of the Pacific—from 150° west longitude (just east of Hawai'i) to the shores of Japan, Southeast Asia, Australia and New Zealand—comprise about 40 percent of the entire ocean area. This vast realm contains the planet's highest diversity of marine life, including fisheries that supply direct economic benefits to some two dozen countries and food to millions of people around the world.

The character of these fisheries relates closely to that of the 200-plus high islands and about 2,500 low islands and atolls sprinkled sparsely across this ocean sector. Most of these specks of land rise steeply from the seafloor, have no continental shelf, and generally lack the lakes and streams that provide nutrients to support ocean life in the coastal waters of larger landmasses. Thus while

Cover image from "The Pelagic Fisheries Research Program: 10 Years of Excellence" report. (Photo by Richard Herrmann)

nearshore fisheries are immediate and significant resources for Pacific island peoples, they represent only a tiny fraction of the region's marine wealth.

Tunas and billfish (such as swordfish and marlins) are sometimes called the "petroleum of the Pacific" for their economic importance. Their delectable meat and prowess make them some of the most popular fish sought for food and sport. In contrast to fish that dwell near the seafloor or spend much of their lives near land, these "pelagic" fish are masters of the high seas, ranging freely throughout the upper waters of the open ocean. While each species has unique traits and behaviors, in general tunas and billfish grow rapidly and possess champion-like stamina.

Clocking speeds of up to 30 miles an hour, they migrate over distances of many hundreds of miles, guided principally by seasonal changes in ocean temperatures and concentrations of prey. During warm seasons some of these streamlined nomads travel as far as northerly latitudes on par with Japan and southerly latitudes

of New Zealand. Another key feature of these fishes is their prolific reproduction.

Spawned mainly in the open seas, their larvae ride on ocean currents far and wide. Thus, the fisheries targeting these species span the Pacific, and understanding their ecology and sustainably managing those fisheries poses a huge and complex challenge. The tuna fisheries are by far the most valuable component of the commercial pelagic fisheries of the central and western Pacific (CWP), producing roughly three-quarters of the ocean-wide catch each year.

Over the last two decades, tuna catches have expanded steadily, chiefly due to the growth of the purse seine fishery. Throughout the 1990s CWP tuna catches averaged about 1.6 million metric tons (mt) annually, with an all-time record set in 1998 at 2.04 million mt. The preliminary estimate for 2002 was nearly 1.9 million mt—almost half of the estimated world tuna catch.

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If you hitched a ride on a space shuttle circling the globe, during much of the voyage the Pacific Ocean would dominate your view of Earth. (Courtesy of NASA)

PFRP Pelagic Fisheries Research Program

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